UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/591,163	KATO ET AL.
	Examiner	Art Unit	
	KISHIN G. BELANI	2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 July 2010</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,4-9,12-16 and 18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,4-9,12-16 and 18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>06/24/2010</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

This action is in response to Applicants' amendment filed on 07/20/2010.

Independent Claims 1 and 9 have been amended. Dependent claims 4-8, 12-16 and

18 have also been amended. **Claims 2-3, 10-11 and 17 have been cancelled**.

Claims 1, 4-9, 12-16 and 18 are now pending in the present application. The

applicants' amendments to claims are shown in *bold and italics*, and the examiner's

response to the claim amendments is shown in **bold** in this office action. **This Action**

is made FINAL.

Information Disclosure Statement

The information disclosure statements submitted on 06/24/2010 have been

considered by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Claims 1 and 9 recite the limitation "wherein said judgment unit repeats the

judgment by comparing the display judgment information having the hierarchical format

and the device-related information having the hierarchical format, starting from a higher

layer of the hierarchical format of the display judgment information and continuing to a

lower layer of the hierarchical format of the display judgment information". However this

claimed limitation is not fully described in the specification. For example, there is only

one occurrence of "hierarchical" (in paragraph 0073 and referring to Fig. 22) in the

specification that associates the hierarchical relationship between device type

information, device information, service information, and function information

respectively. No hierarchical relationship starting from a higher layer of the display

judgment information and continuing to a lower layer of the display judgment information

is described in the specification. This makes the claimed text a new matter. There is no

occurrence of claim words "repeat", "layer", "higher" or "lower" in the specification either.

Dependent claims 4-8, 12-16 and 18 are rejected because they disclose the

same limitations due to their dependency on the independent claims 1 and 9

respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
      or nonobviousness.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the

various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 1, 5-9, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Beecroft (U.S. Patent Publication # 6,760,415 B2)** in view of **Choi**

(U.S. Patent Application Publication # 2004/0150546 A1) and further in view of

Takahashi, Hiroyuki (European Patent Application Publication # EP 1 028 368 A2,

supplied as an IDS by the applicants) and further in view of **Humpleman et al. (U.S.**

Patent Application Publication # 2010/0070868 A1) and further in view of **Mitra (U.S.**

Patent Publication # 7,412,701 B1).

Consider **claim 1,** Beecroft shows and discloses a UI display apparatus that

displays, on a screen, ***an icon representing*** a device connected to a network (Fig. 1

which shows a television 12 (a UI display apparatus) that displays, a phone icon 20 on

its screen, the phone icon representing a voice telephony device 16 connected to a

PSTN network 24, as well as displays a video processing device 14 connected to a

video distribution network 22; column 3, line 64 through column 4, line 39 disclose the

details of the UI display apparatus), said ***UI display*** apparatus comprising:

a communication unit operable to communicate with another device connected to the

network (column 3, lines 64-66 which disclose that the television 12 is connected to a

video processing device 14 (another device), which is connected to a video distribution

network 22);

an obtainment unit operable to obtain, via said communication unit, device-related

information related to the device connected to the network (Fig. 2 that shows device-

related information 46-48 (i.e. caller-ID capability) for the speakerphone that is shown

as an icon 66 on the television screen 60 in Fig. 3, which also shows a set-top box

(STB) 42 that includes means to obtain, through the communication link that connects

the set-top box to the speakerphone (shown in Fig. 1), device-related information (such

as caller-ID capability) of the speakerphone connected to the PSTN network 24, and

Flash 86, Mute 88, and Hold 90 features of the speakerphone shown in Fig. 4; column

4, line 40 through column 5, line 55 disclose the same details); and

a display unit operable to display the device-related information obtained via said

communication unit, when said judgment unit judges that the device-related information

is identified in the display judgment information (Fig. 4 that shows an expanded view of

the speakerphone icon 66 shown in Fig. 3 in minimized form displayed on the television

screen 70; column 5, lines 25-30 which disclose that when the home user answers the

call, the speakerphone widget 66 appears on the television screen 60 in its minimized

but lit up state, indicating that the speakerphone is active; further disclosing that the

minimized icon is not displayed unless the speakerphone call is in progress (i.e. the

user has elected to answer the call by clicking on the answer button 50 shown in Fig.

2)).

However, Beecroft does not specifically disclose a recording unit in which display

judgment information is recorded, the display judgment information indicating whether

or not information should be displayed on the screen; a judgment unit operable to

compare the device-related information obtained by said obtainment unit with the

display judgment information recorded in said recording unit, and operable to judge

whether or not the device-related information is identified in the display judgment

information; and

a communication status recording unit operable to record a communication status for

each communication protocol *of a plurality of communication protocols,* when said

communication unit carries out a communication using at least one communication

protocol *of the plurality of communication protocols*;

wherein the display judgment information recorded in said recording unit

includes, in a hierarchical format, (i) a plurality of pieces of device type

information, each piece of the plurality of pieces of device type information

identifying a type of a device connected to the network, and (ii) a plurality of

pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information,

wherein the device-related information obtained by said obtainment unit is in a

hierarchical format,

wherein said judgment unit repeats the judgment by comparing the display

judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the

hierarchical format of the display judgment information and continuing to a lower

layer of the hierarchical format of the display judgment information, and

wherein said display unit changes an icon displayed thereon corresponding to

the device-related information, the icon being displayed in association with a

layer of the device-related information in the hierarchical format judged, by said

judgment unit, as being identified in the display judgment information.

In the same field of endeavor, Choi shows and discloses the claimed apparatus,

comprising a recording unit in which display judgment information is recorded, the

display judgment information indicating whether or not information should be displayed

on the screen, and a judgment unit operable to compare the device-related information

obtained by said obtainment unit with the display judgment information recorded in said

recording unit, and operable to judge whether or not the device-related information is

identified in the display judgment information (abstract that describes a remote control

service processing device which controls various devices of home network environment

through the use of graphic user interface (GUI), collecting remote control service list

information from the respective devices of the home network, storing collected

information in a storage unit (i.e. recording unit), and providing a remote control service

to a certain device of the connected devices to enable the certain device to remote

control the other devices through the GUI, based on the remote control service list

information **that includes display judgment information, so as to selectively**

display the icons using an icon representation selection tool; Fig. 2 that shows a

remote control service processing device 220, including a wired or wireless

communication interface 222 (obtainment unit), storage unit 224 (recording unit) that

stores (records) remote control service list information; and a control unit 226 that

incorporates a control proxy server 226-2 (a judgment unit); paragraphs 0031-0034

further disclose the claimed features including a judgment unit operable to compare the

device-related information obtained by said obtainment unit with the display judgment

information recorded in said recording unit; and paragraph 0039 which teaches that the

remote control proxy server 226-2 may also provide an icon representation selection

tool (not shown) for the user to choose whether to show the icons of Fig. 9 on the

screen or not; claim 5 also discloses that **the remote control proxy server provides**

an icon representation selection tool as the remote control service, with which a user can selectively display the icons).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide, in the claimed apparatus, a recording unit in which display judgment information is recorded, the display judgment information indicating whether or not information should be displayed on the screen; a judgment unit operable to compare the device-related information obtained by said obtainment unit with the display judgment information recorded in said recording unit, and operable to judge whether or not the device-related information is identified in the display judgment information, as taught by Choi in the UI display apparatus of Beecroft, so as to provide a simple, user-specific graphical interface to the user.

However, Beecroft, as modified by Choi, does not specifically disclose a communication status recording unit operable to record a communication status for each communication protocol **of a plurality of communication protocols**, when said communication unit carries out a communication using at least one communication **protocol of the plurality of communication protocols**; and

wherein the display judgment information recorded in said recording unit includes, in a hierarchical format, (i) a plurality of pieces of device type information, each piece of the plurality of pieces of device type information identifying a type of a device connected to the network, and (ii) a plurality of pieces of device information, each piece of the plurality of pieces of device information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information,

wherein the device-related information obtained by said obtainment unit is in a

hierarchical format,

wherein said judgment unit repeats the judgment by comparing the display

judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the

hierarchical format of the display judgment information and continuing to a lower

layer of the hierarchical format of the display judgment information, and

wherein said display unit changes an icon displayed thereon corresponding to

the device-related information, the icon being displayed in association with a

layer of the device-related information in the hierarchical format judged, by said

judgment unit, as being identified in the display judgment information.

In the same field of endeavor, Takahashi shows and discloses the claimed UI

display apparatus, comprising a communication status recording unit operable to record

a communication status for each communication protocol *of a plurality of*

communication protocols, when said communication unit carries out a communication

using at least one communication *protocol of the plurality of communication*

protocols (Figs. 18, 19, 21, 26, and 29 that show the status of various devices (under

"Status" tab in Fig. 18) connected to the network, Fig. 19 displaying the reasons for

device status not being ready; Fig. 26 providing additional details for each device's

status; and Fig. 29 listing different protocols in use under "Setup" tab 1207; paragraphs

0073, 0077, and 0079 disclose the same details; flowcharts of Figs. 32 and Fig. 34,

steps S3401-S3405 and the MIB (Management Information Base) database that is used

to record the characteristics and status of each device in the network; paragraphs 0080-

0091 describe the details of the recording unit (MIB database)).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to provide, in the claimed apparatus, a communication

status recording unit operable to record a communication status for each

communication protocol of a plurality of communication protocols, when said

communication unit carries out a communication using at least one communication

protocol of the plurality of communication protocols, as taught by Takahashi, in the UI

display apparatus of Beecroft, as modified by Choi, so as to provide a simple, user-

specific graphical interface that includes statuses of user-specified devices to the user.

However, Beecroft, as modified by Choi and Takahashi, does not specifically

disclose an apparatus *wherein the display judgment information recorded in said*

recording unit includes, in a hierarchical format, (i) a plurality of pieces of device

type information, each piece of the plurality of pieces of device type information

identifying a type of a device connected to the network, and (ii) a plurality of

pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information, wherein the device-related information

obtained by said obtainment unit is in a hierarchical format, wherein said

judgment unit repeats the judgment by comparing the display judgment

information having the hierarchical format and the device related information

having the hierarchical format, starting from a higher layer of the hierarchical

format of the display judgment information and continuing to a lower layer of the

hierarchical format of the display judgment information, and wherein said display

unit changes an icon displayed thereon corresponding to the device-related

information, the icon being displayed in association with a layer of the device-

related information in the hierarchical format judged, by said judgment unit, as

being identified in the display judgment information.

In the same field of endeavor, Humpleman et al. show and disclose the claimed

apparatus, *wherein the display judgment information recorded in said recording*

unit includes, in a hierarchical format, (i) a plurality of pieces of device type

information, each piece of the plurality of pieces of device type information

identifying a type of a device connected to the network, and (ii) a plurality of

pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information **(Figs 4-6; Table 2 in paragraphs 0061-0064**

that lists, for each device, device type information (e.g. Device Icon, Device Type,

and Device Model), device information (e.g. Device Name and Device

Manufacturer), service information provided by the device; and paragraph 0068

that describes the hierarchical structure of the devices, such as server devices

(e.g. DVCR that supplies images) and client devices (e.g. DTV that renders the

images on a display screen), wherein the server type devices are represented on

the top-level GUI page 220, can assume priority, and use a larger size icon versus

client devices that may not be displayed on the top-level GUI page 220, since they

have no service to offer);

wherein said judgment unit repeats the judgment by comparing the display

judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the

hierarchical format of the display judgment information and continuing to a lower

layer of the hierarchical format of the display judgment information (paragraph

0068 which teaches that client devices, such as DTV 102 and HDTV1 may not be

displayed on the top-level GUI page 220 based on their device related information

(obtained by a discovery process that reads information from 1394 address space

data storage) as compared to server devices, such as DVCR or DVD that offer

services, which are displayed on the top-level GUI 220 and may even use a larger

size icon); *and*

wherein said display unit changes an icon displayed thereon corresponding to

the device-related information, the icon being displayed in association with a

layer of the device-related information in the hierarchical format judged, by said

judgment unit, as being identified in the display judgment information (paragraph

0068 which further discloses that server devices, such as DVCR or DVD that offer

services, are displayed on the top-level GUI 220 and may even use a larger size icon).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide, in the claimed apparatus, the display judgment information recorded in said recording unit includes, in a hierarchical format, (i) a plurality of pieces of device type information, each piece of the plurality of pieces of device type information identifying a type of a device connected to the network, and (ii) a plurality of pieces of device information, each piece of the plurality of pieces of device information identifying information about the device for which the type is identified by a corresponding piece of the device type information of the plurality of pieces of device type information, wherein said judgment unit repeats the judgment by comparing the display judgment information having the hierarchical format and the device related information having the hierarchical format, starting from a higher layer of the hierarchical format of the display judgment information and continuing to a lower layer of the hierarchical format of the display judgment information, and wherein said display unit changes an icon displayed thereon corresponding to the device-related information, the icon being displayed in association with a layer of the device-related information in the hierarchical format judged, by said judgment unit, as being identified in the display judgment information, as taught by Humpleman et al., in the UI display apparatus of Beecroft, as modified by Choi and Takahashi, so as to provide a device-compatible, user-specific graphical interface to the user.

However, Beecroft, as modified by Choi, Takahashi, and Humpleman et al., does

not explicitly recite that in the claimed apparatus, *the device-related information*

obtained by said obtainment unit is in a hierarchical format.

In the same field of endeavor, Mitra discloses the claimed apparatus, *wherein*

the device-related information obtained by said obtainment unit is in a

hierarchical format **(MIB 204 of Fig. 2 and column 5, lines 59-64 show and**

disclose this claimed element).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to provide, in the claimed apparatus, the device-related

information obtained by said obtainment unit in a hierarchical format, as taught by Mitra,

in the UI display apparatus of Beecroft, as modified by Choi, Takahashi, and

Humpleman et al., so as to provide a simple, user-specific graphical interface.

Consider **claim 5,** and **as it applies to claim 1 above,** Beecroft, as modified by

Choi, Takahashi, Humpleman et al. and Mitra further shows and discloses the claimed

UI display apparatus, wherein said obtainment unit obtains the device-related

information via said communication unit, using at least one or a combination of *the*

plurality of communication protocols (in Takahashi reference, Fig. 29 listing different

protocols in use under "Setup" tab 1207; paragraphs 0073, 0077, and 0079 disclose the

same details); and

wherein said display unit performs the display *of the device-related information* in

accordance with the communication status recorded in said communication status, *for*

the at least one or the combination of the plurality of communication protocols,

recorded in said communication status recording unit and the device-related

information obtained by said obtainment unit (in Takahashi reference, Figs. 18, 19, 21,

26, and 29 that show the status of various devices (under "Status" tab in Fig. 18)

connected to the network, Fig. 19 displaying the reasons for device status not being

ready; Fig. 26 providing additional details for each device's status).

Consider **claim 6,** and **as it applies to claim 5 above,** Beecroft, as modified by

Choi, Takahashi, Humpleman et al. and Mitra further shows and discloses the claimed

UI display apparatus, wherein the display *of the device related information* is *a*

display of one of an icon display and a text display, and *wherein* said display unit

displays one of the icon display and the text display that corresponds to the device-

related information, when said judgment unit judges that the *device-related*

information is identified in the display judgment information (in Choi reference,

Fig. 7 that displays selected devices in text form (PDP1v2 or Plasma Display Panel 1,

version 2, and AMP421 or audio-visual amplifier 421) instead of being shown as icons,

along with the services offered by each selected device and command issued by remote

control service processing device; Fig. 9 that also shows DVD device being powered on

in text form instead of in iconic form, thereby disclosing "text display" form of display of

device-related information for selected devices; paragraph 0039 which teaches that the

remote control proxy server 226-2 (shown in Fig. 2) may also provide an icon

representation selection tool for the user to choose whether to show the icons on the

screen or not, further disclosing the text form of representing devices and their

associated information, including offered services; paragraph 0044 also describes the

details shown in Fig. 7).

Consider **claim 7,** and **as it applies to claim 5 above,** Beecroft, as modified by

Choi, Takahashi, Humpleman et al. and Mitra further shows and discloses the claimed

UI display apparatus, wherein the display *of the device-related information* is *a*

display of one of an icon display and a text display, and *wherein* said display unit

displays one of the icon display and the text display differently for each communication

status *recorded for each communication protocol of the plurality of protocols*,

when said judgment unit judges that the *device-related information is identified in*

the display judgment information (in Beecroft reference, Figs. 3-4 that show the

speakerphone icon in its minimized form (in Fig. 3) on the main screen when not in use,

and in expanded state display form when in use (in Fig. 4); column 4, lines 34-35 which

teach that the phone icon 66 is present when the speakerphone is in use, and lines 45-

48 further teach that the icon also serves as an off-hook indicator when the

speakerphone is in use, the expanded state provides a full range of speaker-phone

functions; column 4, line 60 through column 5, line 5 further elaborate the same details,

thereby disclosing that said display unit is operable to perform one of the icon display

and the text display differently for each communication status).

Consider **claim 8,** and **as it applies to claim 1 above,** Beecroft, as modified by

Choi and Takahashi, further shows and discloses the claimed UI display apparatus,

further comprising an input update unit through which a user selects the display

judgment information recorded in said recording unit and inputs and updates the

selected ***display judgment*** information (in Choi reference, Fig. 2, control unit 226 that

includes a remote control proxy server 226-2 and a database server 226-1, which

together act as an input update unit that enables a user to select the device information

stored in DB1 database within storage unit 24, to update by grouping select functions of

different network devices, and create a new device identifier under which the grouped

functions are stored in DB2; Fig. 4 that further shows a signal flow in the process of

setting user's frequently used functions of the devices connected in the network, and

Fig. 5 that shows a signal flow in the executing of the selection made by the remote

control service menu selection setting operations of Fig. 4; paragraphs 0043-0050

further disclose the details of updating by grouping different services offered by the

connected devices, so that a selection item, realized as a hot-key through the use of

GUI, can replace a series of complicated processes using plural remote controllers).

Consider **claims 9 and 18**, Beecroft shows and discloses a UI display method for

use with a UI display apparatus that displays, on a screen, ***an icon representing*** a

device connected to a network, and a ***non-transitory computer-readable recording***

medium storing a program ***thereon, the program causing*** a computer to execute ***the***

method of claim 9 (system claims 1 and 12; Fig. 1 which shows a television 12 (a UI

display apparatus) that displays a phone icon 20 on its screen, the phone icon

representing a voice telephony device 16 connected to a PSTN network 24, as well as

to a video processing device 14 connected to a video distribution network 22; column 3,

line 64 through column 4, line 39 disclose the details of the method used for the claimed

UI display apparatus), said *UI display* method and computer-readable medium with

program code, comprising:

a communication step of communicating with another device connected to the network

(column 3, lines 64-66 which disclose that the television 12 is connected to a video

processing device 14 (another device), which is connected to a video distribution

network 22);

an obtainment step of obtaining, via said communication step, device-related

information related to the device connected to the network (Fig. 2 that shows device-

related information 46-48 (i.e. caller-ID capability) for the speakerphone that is shown

as an icon 66 on the television screen 60 in Fig. 3, which also shows a set-top box

(STB) 42 that includes means to obtain, through the communication link that connects

the set-top box to the speakerphone (shown in Fig. 1), device-related information (such

as caller-ID capability) of the speakerphone connected to the PSTN network 24, and

Flash 86, Mute 88, and Hold 90 features of the speakerphone shown in Fig. 4; column

4, line 40 through column 5, line 55 disclose the same details); and

a display step of displaying the device-related information obtained via said

communication step, when said judgment step judges that the device-related

information is identified in the display judgment information (Fig. 4 that shows an

expanded view of the speakerphone icon 66 shown in Fig. 3 in minimized form

displayed on the television screen 70; column 5, lines 25-30 which disclose that when

the home user answers the call, the speakerphone widget 66 appears on the television

screen 60 in its minimized but lit up state, indicating that the speakerphone is active;

further disclosing that the minimized icon is not displayed unless the speakerphone call

is in progress (i.e. the user has elected to answer the call by clicking on the answer

button 50 shown in Fig. 2)).

However, Beecroft does not specifically disclose a recording step of recording

display judgment information indicating whether or not information should be displayed

on the screen; a judgment step of comparing the device-related information obtained in

said obtainment step with the display judgment information recorded in said recording

step, and judging whether or not the device-related information is identified in the

display judgment information; a communication status recording step of recording a

communication status for each communication protocol *of a plurality of*

communication protocols, when said communication step *carries out a*

communication using at least one communication protocol of the plurality of

communication protocols,

wherein the display judgment information recorded in said recording step

includes, in a hierarchical format, (i) a plurality of pieces of device type

information, each piece of the plurality of pieces of device type information

identifying a type of a device connected to the network, and (ii) a plurality of

pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information,

wherein the device-related information obtained by said obtainment step is in a

hierarchical format,

wherein said judgment step repeats the judgment by comparing the display

judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the

hierarchical format of the display judgment information and continuing to a lower

layer of the hierarchical format of the display judgment information, and

wherein said display step changes an icon displayed thereon corresponding to

the device-related information, the icon being displayed in association with a

layer of the device-related information in the hierarchical format judged, by said

judgment step, as being identified in the display judgment information.

In the same field of endeavor, Choi shows and discloses the claimed recording

step of recording display judgment information indicating whether or not information

should be displayed on the screen, and a judgment step of comparing the device-

related information obtained in said obtainment step with the display judgment

information recorded in said recording step, and judging whether or not the device-

related information is identified in the display judgment information (abstract that

describes a remote control service processing device which controls various devices of

home network environment through the use of graphic user interface (GUI), collecting

remote control service list information from the respective devices of the home network,

storing the collected information in a storage unit, and providing a remote control

service to a certain device of the connected devices to enable the certain device to

remote control the other devices through the GUI, based on the remote control service

list information; Fig. 2, remote control service processing device 220 that includes a

wired or wireless communication interface 222, storage unit 224 that matches remote

control service list information responding to the corresponding remote controllers, and

storing the information; as well as a remote control proxy server 226-2; paragraphs

0031-0034 disclose the same details; and paragraph 0039 which teaches that the

remote control proxy server 226-2 may also provide an icon representation selection

tool (not shown) for the user to choose whether to show the icons of Fig. 9 on the

screen or not; claim 5 also discloses the same details).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to disclose a recording step of recording display

judgment indicating whether or not information should be displayed on the screen; a

judgment step of comparing the device-related information obtained by said obtainment

step with the display judgment information recorded in said recording step, and judging

whether or not the device-related information is identified in the display judgment

information, as taught by Choi in the UI display method of Beecroft, so as to provide a

simple, user-specific graphical interface to the user.

However, Beecroft, as modified by Choi, does not specifically disclose a

communication status recording step of recording a communication status for each

communication protocol *of a plurality of communication protocols*, when said

communication step *carries out a communication* using at least one communication

protocol of the plurality of communication protocols,

wherein the display judgment information recorded in said recording step

includes, in a hierarchical format, (i) a plurality of pieces of device type

information, each piece of the plurality of pieces of device type information

identifying a type of a device connected to the network, and (ii) a plurality of

pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information,

wherein the device-related information obtained by said obtainment step is in a

hierarchical format,

wherein said judgment step repeats the judgment by comparing the display

judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the

hierarchical format of the display judgment information and continuing to a lower

layer of the hierarchical format of the display judgment information, and

wherein said display step changes an icon displayed thereon corresponding to

the device-related information, the icon being displayed in association with a

layer of the device-related information in the hierarchical format judged, by said

judgment step, as being identified in the display judgment information.

In the same field of endeavor, Takahashi shows and discloses the claimed UI

display apparatus, comprising a communication status recording step of recording a

communication status for each communication protocol ***of a plurality of***

communication protocols, when said communication step ***carries out a***

communication using at least one communication protocol of the plurality of

communication protocols (Figs. 18, 19, 21, 26, and 29 that show the status of various

devices (under "Status" tab in Fig. 18) connected to the network, Fig. 19 displaying the

reasons for device status not being ready; Fig. 26 providing additional details for each

device's status; and Fig. 29 listing different protocols in use under "Setup" tab 1207;

paragraphs 0073, 0077, and 0079 disclose the same details; flowcharts of Figs. 32 and

Fig. 34, steps S3401-S3405 and the MIB (Management Information Base) database

that is used to record the characteristics and status of each device in the network;

paragraphs 0080-0091 describe the details of the recording unit (MIB database)).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to provide a communication status recording step of

recording a communication status for each communication protocol of a plurality of

communication protocols, when said communication step carries out a communication

using at least one communication protocol of the plurality of communication protocols,

as taught by Takahashi, in the UI display method of Beecroft, as modified by Choi, so

as to provide a simple, user-specific graphical interface that includes statuses of user-

specified devices to the user.

However, Beecroft, as modified by Choi and Takahashi, does not specifically disclose a method *wherein the display judgment information recorded in said recording step includes, in a hierarchical format, (i) a plurality of pieces of device type information, each piece of the plurality of pieces of device type information identifying a type of a device connected to the network, and (ii) a plurality of pieces of device information, each piece of the plurality of pieces of device information identifying information about the device for which the type is identified by a corresponding piece of the device type information of the plurality of pieces of device type information, wherein the device-related information obtained by said obtainment step is in a hierarchical format, wherein said judgment step repeats the judgment by comparing the display judgment information having the hierarchical format and the device related information having the hierarchical format, starting from a higher layer of the hierarchical format of the display judgment information and continuing to a lower layer of the hierarchical format of the display judgment information, and wherein said display step changes an icon displayed thereon corresponding to the device-related information, the icon being displayed in association with a layer of the device-related information in the hierarchical format judged, by said judgment step, as being identified in the display judgment information.*

In the same field of endeavor, Humpleman et al. show and disclose the claimed method, *wherein the display judgment information recorded in said recording step includes, in a hierarchical format, (i) a plurality of pieces of device type*

information, each piece of the plurality of pieces of device type information

identifying a type of a device connected to the network, and (ii) a plurality of

pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is

identified by a corresponding piece of the device type information of the plurality

of pieces of device type information (Figs 4-6; Table 2 in paragraphs 0061-0064

that lists, for each device, device type information (e.g. Device Icon, Device Type,

and Device Model), device information (e.g. Device Name and Device

Manufacturer), service information provided by the device; and paragraph 0068

that describes the hierarchical structure of the devices, such as server devices

(e.g. DVCR that supplies images) and client devices (e.g. DTV that renders the

images on a display screen), wherein the server type devices are represented on

the top-level GUI page 220, can assume priority, and use a larger size icon versus

client devices that may not be displayed on the top-level GUI page 220, since they

have no service to offer);

wherein said judgment step repeats the judgment by comparing the display

judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the

hierarchical format of the display judgment information and continuing to a lower

layer of the hierarchical format of the display judgment information (paragraph

0068 which teaches that client devices, such as DTV 102 and HDTV1 may not be

displayed on the top-level GUI page 220 based on their device related information

(obtained by a discovery process that reads information from 1394 address space

data storage) as compared to server devices, such as DVCR or DVD that offer

services, which are displayed on the top-level GUI 220 and may even use a larger

size icon); *and*

wherein said display step changes an icon displayed thereon corresponding to

the device-related information, the icon being displayed in association with a

layer of the device-related information in the hierarchical format judged, by said

judgment step, as being identified in the display judgment information **(paragraph**

0068 which further discloses that server devices, such as DVCR or DVD that offer

services, are displayed on the top-level GUI 220 and may even use a larger size

icon).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to provide, in the claimed method, the display

judgment information recorded in said recording step includes, in a hierarchical format,

(i) a plurality of pieces of device type information, each piece of the plurality of pieces of

device type information identifying a type of a device connected to the network, and (ii)

a plurality of pieces of device information, each piece of the plurality of pieces of device

information identifying information about the device for which the type is identified by a

corresponding piece of the device type information of the plurality of pieces of device

type information, wherein said judgment step repeats the judgment by comparing the

display judgment information having the hierarchical format and the device related

information having the hierarchical format, starting from a higher layer of the hierarchical

format of the display judgment information and continuing to a lower layer of the

hierarchical format of the display judgment information, and wherein said display step

changes an icon displayed thereon corresponding to the device-related information, the

icon being displayed in association with a layer of the device-related information in the

hierarchical format judged, by said judgment step, as being identified in the display

judgment information, as taught by Humpleman et al., in the UI display method of

Beecroft, as modified by Choi and Takahashi, so as to provide a device-compatible,

user-specific graphical interface to the user.

However, Beecroft, as modified by Choi, Takahashi, and Humpleman et al., does

not explicitly recite that in the claimed apparatus, *the device-related information*

obtained by said obtainment step is in a hierarchical format.

In the same field of endeavor, Mitra discloses the claimed method, *wherein the*

device-related information obtained by said obtainment step is in a hierarchical

format **(MIB 204 of Fig. 2 and column 5, lines 59-64 show and disclose this**

claimed element).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to provide, in the claimed method, the device-related

information obtained by said obtainment step in a hierarchical format, as taught by

Mitra, in the UI display method of Beecroft, as modified by Choi, Takahashi, and

Humpleman et al., so as to provide a simple, user-specific graphical interface.

Consider **claim 13,** and **as it applies to claim 9 above,** Beecroft, as modified by

Choi and Takahashi, further shows and discloses the claimed UI display method,

wherein in said obtainment step, the device-related information is obtained through said

communication step, using at least one or a combination of communication protocols (in

Takahashi reference, Fig. 29 listing different protocols in use under "Setup" tab 1207;

paragraphs 0073, 0077, and 0079 disclose the same details); and

in said display step, the display is performed in accordance with the communication

status recorded in said communication status recording step and the device-related

information obtained by said obtainment step (in Takahashi reference, Figs. 18, 19, 21,

26, and 29 that show the status of various devices (under "Status" tab in Fig. 18)

connected to the network, Fig. 19 displaying the reasons for device status not being

ready; Fig. 26 providing additional details for each device's status).

Consider **claim 14,** and **as it applies to claim 13 above,** Beecroft, as modified

by Choi and Takahashi, further shows and discloses the claimed UI display method,

wherein the display is one of icon display and text display, and in said display step, one

of the icon display and the text display which corresponds to the device-related

information is performed, in the case where it is judged in said judgment step that the

display should be performed (in Choi reference, Fig. 7 that displays selected devices in

text form (PDP1v2 or Plasma Display Panel 1, version 2, and AMP421 or audio-visual

amplifier 421) instead of being shown as icons, along with the services offered by each

selected device and command issued by remote control service processing device; Fig.

9 that also shows DVD device being powered on in text form instead of in iconic form, thereby disclosing "text display" form of display of device-related information for selected devices; paragraph 0039 which teaches that the remote control proxy server 226-2 (shown in Fig. 2) may also provide an icon representation selection tool for the user to choose whether to show the icons on the screen or not, further disclosing the text form of representing devices and their associated information, including offered services; paragraph 0044 also describes the details shown in Fig. 7).

Consider **claim 15,** and **as it applies to claim 13 above,** Beecroft, as modified by Choi and Takahashi, further shows and discloses the claimed UI display method, wherein the display is one of icon display and text display, and in said display step, one of the icon display and the text display is performed differently for each communication status, in the case where it is judged in said judgment step that the display should be performed (in Beecroft reference, Figs. 3-4 that show the speakerphone icon in its minimized form (in Fig. 3) on the main screen when not in use, and in expanded state display form when in use (in Fig. 4); column 4, lines 34-35 which teach that the phone icon 66 is present when the speakerphone is in use, and lines 45-48 further teach that the icon also serves as an off-hook indicator when the speakerphone is in use, the expanded state provides a full range of speaker-phone functions; column 4, line 60 through column 5, line 5 further elaborate the same details, thereby disclosing that said display unit is operable to perform one of the icon display and the text display differently for each communication status).

Consider **claim 16,** and **as it applies to claim 9 above,** Beecroft, as modified by

Choi and Takahashi, further shows and discloses the claimed UI display method, further

comprising an input update step through which a user selects the display judgment

information recorded in said recording step and inputs and updates the selected

information (in Choi reference, Fig. 2, control unit 226 that includes a remote control

proxy server 226-2 and a database server 226-1, which together act as an input update

unit that enables a user to select the device information stored in DB1 database within

storage unit 24, to update by grouping select functions of different network devices, and

create a new device identifier under which the grouped functions are stored in DB2; Fig.

4 that further shows a signal flow in the process of setting user's frequently used

functions of the devices connected in the network, and Fig. 5 that shows a signal flow in

the executing of the selection made by the remote control service menu selection

setting operations of Fig. 4; paragraphs 0043-0050 further disclose the details of

updating by grouping different services offered by the connected devices, so that a

selection item, realized as a hot-key through the use of GUI, can replace a series of

complicated processes using plural remote controllers).

Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Beecroft (U.S. Patent Publication # 6,760,415 B2)** in view of **Choi (U.S. Patent**

Application Publication # 2004/0150546 A1) and further in view of **Takahashi,**

Hiroyuki (European Patent Application Publication # EP 1 028 368 A2, supplied as

an IDS by the applicants) and further in view of **Humpleman et al. (U.S. Patent**

Application Publication # 2010/0070868 A1) and further in view of **Mitra (U.S. Patent**

Publication # 7,412,701 B1) and further in view of **Castaldi et al. (U.S. Patent**

Application Publication # 2005/0005109 A1).

        Consider **claim 4,** and **as it applies to claim 1 above,** Beecroft, as modified by

Choi, Takahashi, Humpleman et al. and Mitra shows and discloses the claimed

apparatus, further comprising authenticating whether or not the device-related

information obtained by said obtainment unit has been sent from an authorized device,

and performing the authentication using an identifier to identify the device, *such that*

when the device-related information is authenticated as being sent from the

authorized device, the device-related information is determined to be valid,

wherein said display unit displays the device-related information when the device-

related information is determined to be valid (in Takahashi reference, Figs. 1-2 and

paragraphs 0050-0055 which disclose associating a registered name (e.g. "Device-A")

in a MIB database for an MFP (Multi-Function Peripheral) 104a, since the device 104a

has been registered in the MIB database, it is considered authenticated, so that any

information received from Device-A is considered to have come from an authenticated

device 104a).

        However, Beecroft, as modified by Choi, Takahashi, Humpleman et al., and Mitra

do not specifically describe an authentication unit for authenticating device-related

information, although registering a device's characteristics in a MIB database can be considered a form of authentication.

In the same field of endeavor, Castaldi et al. disclose the claimed apparatus, further comprising an authentication unit for authenticating whether or not the device-related information obtained by said obtainment unit has been sent from an authorized device (Fig. 5, checkbox 420 that shows means to enable encryption while displaying information, Fig. 7 that further shows use of key 56 to authenticate received information 54; paragraphs 0047-0051 that describe encryption and subsequent decryption of information received by a display device, and use of algorithms such as asymmetric key-based algorithm, symmetric key-based algorithm, etc. to authenticate the validity of the received information, thereby disclosing using an authentication unit for authenticating whether or not the device-related information obtained by said obtainment unit has been sent from an authorized device).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an authentication unit whether or not the device-related information obtained by said obtainment unit has been sent from an authorized device, and perform the authentication using an identifier to identify the device, such that when the device-related information is authenticated as being sent from the authorized device, the device-related information is determined to be valid, wherein said display unit displays the device-related information when the device-related information is determined to be valid, as taught by Castaldi et al., in the

apparatus of Beecroft, as modified by Choi, Takahashi, Humpleman et al. and Mitra, so as to ensure the security and authenticity of the received data.

Consider **claim 12,** and **as it applies to claim 9 above,** Beecroft, as modified by Choi, Takahashi, Humpleman et al., Mitra and Castaldi et al., shows and discloses the claimed method, further comprising an authentication step of authenticating whether or not the device-related information obtained in said obtainment step has been sent from an authorized device, *said authentication step performing the authentication* using an identifier to identify the device, *such that when the device-related information is authenticated as being sent from the authorized device, the device-related information is determined to be valid,* wherein in said display step, the device-related information is displayed when the device-related information is *determined to be* valid (in Takahashi reference, Figs. 1-2 and paragraphs 0050-0055 which disclose associating a registered name (e.g. "Device-A") in a MIB database for an MFP (Multi-Function Peripheral) 104a, since the device 104a has been registered in the MIB database, it is considered authenticated, so that any information received from Device-A is considered to have come from an authenticated device 104a); and (in the Castaldi et al. reference, Fig. 5, checkbox 420 that shows means to enable encryption while displaying information, Fig. 7 that further shows use of key 56 to authenticate received information 54; paragraphs 0047-0051 that describe encryption and subsequent decryption of information received by a display device, and use of algorithms such as asymmetric key-based algorithm, symmetric key-based algorithm,

etc. to authenticate the validity of the received information, thereby disclosing using an

authentication unit for authenticating whether or not the device-related information

obtained by said obtainment unit has been sent from an authorized device).

Response to Arguments

Applicant's arguments with respect to claims 1, 4-9, 12-16 and 18 have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed**

to:

> Commissioner for Patents
> P.O. Box 1450
> Alexandria, VA 22313-1450

Art Unit: 2443

Hand-delivered responses should be brought to

> Customer Service Window
> Randolph Building
> 401 Dulany Street
> Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-

1768. The Examiner can normally be reached on Monday-Friday from 6:00 am to 5:00

pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Tonia Dollinger can be reached on (571) 272-4170. The fax phone number

for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist/customer service whose telephone

number is (571) 272-2600.

/K. G. B./
Examiner, Art Unit 2443

September 10, 2010

/George C Neurauter, Jr./

Primary Examiner, Art Unit 2443